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10/525,417	09/20/2005	Craig Matthew Brown	00169.002764	5089
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EXAMINER				
WELCH, DAVID T				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/525,417

**Applicant(s)**

BROWN, CRAIG MATTHEW

**Examiner**

DAVID T. WELCH

**Art Unit**

4173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-850)  
Paper No(s)/Mail Date 2/23/2005 and 3/17/2005  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Inventor's Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Preliminary Amendments***

1. Applicant's preliminary amendments filed on 23 February, 2005 have been entered. Claims 4, 7, 8, 13, 14, and 17 have been amended. Claims 33-38 have been canceled. No claims have been added. Claims 1-32 are still pending in this application, with claims 1, 15, 18, and 21-32 being independent.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: figure 15, reference 1502. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claims 16, 27, 30, and 32 are objected to because of the following of minor typographical errors.

Regarding claim 16, there is a space in the middle of the word "utilizing" that should be removed.

Regarding claim 27, "colom' and opacity component values" should be amended to read --color and opacity component values--.

Regarding claim 30, "means for generatulg at least one opacity channel" should be amended to read --means for generating at least one opacity channel--.

Regarding claim 32, "A computer prograrl product" should be amended to read --A computer program product--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding this claim, the claimed subject matter is unclear because it recites an additional step of "applying a group" but does not provide any indication of how a group is applied or to what a group is applied. It is also unclear as to whether or not applicant intended to refer the group recited in claim 4, or if this is another group.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 27-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 27-29, these claims are directed to a computer program, and thus are drawn to functional descriptive material, not claimed as residing on a computer readable medium. MPEP § 2106.01, Section I, states:

"Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.

"Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

"In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory."

To overcome this rejection, examiner suggests that any claims directed to the computer program be amended such that they embody the functional descriptive material on a statutory computer readable medium.

Regarding claims 30-32, these claims are directed to a computer readable medium that can be a transmission medium (see page 19, lines 19-21, of the specification). Transmission media, however, are nonstatutory forms of computer readable media. To overcome this rejection, the examiner suggests that any claims directed to the computer readable medium be amended such that they are directed to a computer *storage* medium, or the specification be amended such that the definition of a computer readable medium excludes nonstatutory forms of computer readable media.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by *Adobe PDF 1.4 Specification*, December 2001, referred herein as Adobe.

Regarding claim 1, Adobe teaches a method of compositing at least one graphical object with an image, said object and said image having associated color and opacity component values (page 410, paragraph 4, beginning with "A given object..." through paragraph 6), said method comprising the steps of: generating at least one opacity channel having associated opacity component values (page 421, paragraph 1; page 422, paragraph 2, beginning with "All of these...", and associated functions); compositing the color and opacity component values of said at least one object with the color and opacity component values of said image (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions); and compositing said opacity component values of said at least one object with that of said at least one opacity channel to produce an altered opacity channel (page 423, the  $q_r$  function;  $q_s$  is the object opacity,  $q_b$  is the opacity channel with which the object opacity is composited;  $q_r$  is the altered opacity channel), said altered opacity channel thereby

representing the opacity component values associated with said image remaining in said image following composition with said color and opacity components of said at least one object (page 410, paragraph 4, beginning with "A given object...", lines 1-3; the compositing is cumulative, therefore the altered opacity channel represents the opacity following the composition, and is then used for the next composition).

Regarding claim 2, Adobe teaches a method according to claim 1, further comprising the step of utilizing said altered opacity channel to remove the color and opacity component values of said image remaining in said image following composition with said color and opacity component values of said at least one object (page 411, paragraph 3, beginning with "An object's opacity...", lines 1-4; paragraph 5, beginning with "One or more..."; page 417, the blend modes, e.g. Overlay, Darken, Lighten; furthermore, the purpose of compositing alpha [opacity] values with color is to determine to what degree, and in what manner, the images being composited add to, or remove from, one another's color and opacity).

Regarding claim 3, Adobe teaches a method according to claim 2, further comprising the step of utilizing said altered opacity channel to composite the color and opacity component values of said at least one object with the color and opacity component values of said image (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions; page 410, paragraph 4, beginning with "A given object...", lines 1-3; the compositing is cumulative, thus the altered opacity channel is used for the next composition).

Regarding claim 4, Adobe teaches a method according to any one of claims 1 to 3, wherein said at least one object is one object of a grouped plurality of objects (page 425, paragraph 1, lines 1-3; page 411, paragraph 5, beginning with "One or more...").

Regarding claim 5, Adobe teaches a method according to claim 4, further comprising the step of applying a group (page 425, paragraph 2, beginning with "The objects contained").

Regarding claim 6, Adobe teaches a method according to claim 4, further comprising the step of compositing color effect to said grouped plurality of objects and opacity component values of each object of said grouped plurality of objects with the color and opacity component values of said image (page 425, paragraph 2, beginning with "The objects contained"; page 411, paragraph 5, beginning with "One or more..."; page 426, the group compositing formula  $C_i$  at the bottom).

Regarding claim 7, Adobe teaches a method according to claim 1, further comprising the step of inverting said opacity values of said altered opacity channel (page 423, the  $q_r$  function; substituting the union function into the opacity compositing  $q_r$  function, the opacity is inverted, i.e. 1-opacity; also, see page 423, paragraph 2, beginning with "where b and s...").

Regarding claim 8, Adobe teaches a method according to claim 1, further comprising the step of copying said image to form an image copy (page 77, the description of bit position 12, lines 1-2).

Regarding claim 9, Adobe teaches a method according to claim 8, further comprising the step of compositing color and opacity component values of said at least



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one object with color and opacity component values of said image copy (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions).

Regarding claim 10, Adobe teaches a method according to claim 9, wherein said altered opacity channel represents opacity component values associated with said image copy remaining in said image copy following composition of said color and opacity component values of said at least one object with said color and opacity component values of said image copy (page 410, paragraph 4, beginning with "A given object...", lines 1-3; the compositing is cumulative, therefore the altered opacity channel represents the opacity following the composition, and is then used for the next composition).

Regarding claim 11, Adobe teaches a method according to claim 9, further comprising the step of utilizing said altered opacity channel to remove the color and opacity component values of said image copy remaining in said image copy following composition of said color and opacity component values of said at least one object with said color and opacity component values of said image copy (page 411, paragraph 3, beginning with "An object's opacity...", lines 1-4; paragraph 5, beginning with "One or more..."; page 417, the blend modes, e.g. Overlay, Darken, Lighten; furthermore, the purpose of compositing alpha [opacity] values with color is to determine to what degree, and in what manner, the images being composited add to, or remove from, one another's color and opacity).

Regarding claim 12, Adobe teaches a method according to claim 11, further comprising the step of utilizing said altered opacity channel to composite the color and opacity component values of said at least one object with the color and opacity component values of said image (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions; page 410, paragraph 4, beginning with "A given object...", lines 1-3; the compositing is cumulative, thus the altered opacity channel is used for the next composition).

Regarding claims 13 and 14, Adobe teaches a method according to claim 1, wherein said associated color and opacity component values of said object and said image are accessed from an image file (page 1, section 1.1, paragraph 1, beginning with "This book provides...", lines 3-5).

Regarding claim 15, Adobe teaches a method of compositing at least one graphical object with an image, said object and said image having associated color and opacity component values (page 410, paragraph 4, beginning with "A given object..." through paragraph 6), said method comprising the steps of: generating at least one opacity channel having associated opacity component values (page 421, paragraph 1; page 422, paragraph 2, beginning with "All of these...", and associated functions); compositing the color and opacity component values of said at least one object with the color and opacity component values of said image (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions); compositing

said opacity component values of said at least one object with that of said at least one opacity channel to produce an altered opacity channel (page 423, the  $q_r$  function;  $q_s$  is the object opacity,  $q_b$  is the opacity channel with which the object opacity is composited;  $q_r$  is the altered opacity channel); and utilizing said altered opacity channel to remove the color and opacity component values of said image remaining in said image following composition with said color and opacity component values of said at least one object (page 411, paragraph 3, beginning with "An object's opacity...", lines 1-4; paragraph 5, beginning with "One or more..."; page 417, the blend modes, e.g. Overlay, Darken, Lighten; furthermore, the purpose of compositing alpha [opacity] values with color is to determine to what degree, and in what manner, the images being composited, add to, or remove from, one another's color and opacity).

Regarding claims 16 and 17, the limitations of these claims correspond to the limitations of claims 3 and 4, respectively. Thus, they are rejected on the same grounds as claims 3 and 4, respectively.

Regarding claim 18, Adobe teaches a method of compositing a grouped plurality of graphical objects with an image (page 425, paragraph 1, lines 1-3; page 411, paragraph 5, beginning with "One or more..."), each said object and said image having associated color and opacity component values (page 410, paragraph 4, beginning with "A given object..." through paragraph 6), said method comprising the steps of: generating at least one opacity channel having associated opacity component values (page 421, paragraph 1; page 422, paragraph 2, beginning with "All of these...", and associated functions); compositing the color and opacity component values of each of

said objects with the color and opacity component values of said image (color compositing: page 419, section 7.2.5, the color compositing formula and succeeding paragraph; opacity compositing: page 423, the first two paragraphs, and associated functions); compositing said opacity component values of each of said objects with that of said at least one opacity channel to produce an altered opacity channel (page 423, the  $q_r$  function;  $q_s$  is the object opacity,  $q_b$  is the opacity channel with which the object opacity is composited;  $q_r$  is the altered opacity channel); and utilizing said altered opacity channel to remove the color and opacity component values of said image remaining in said image following composition with the color and opacity component values of each of said objects (page 411, paragraph 3, beginning with "An object's opacity..." lines 1-4; paragraph 5, beginning with "One or more..."; page 417, the blend modes, e.g. Overlay, Darken, Lighten; furthermore, the purpose of compositing alpha [opacity] values with color is to determine to what degree, and in what manner, the images being composited, add to, or remove from, one another's color and opacity).

Regarding claims 19 and 20, the limitations of these claims correspond to the limitations of claims 8 and 9, respectively. Thus, they are rejected on the same grounds as claims 8 and 9, respectively.

Regarding claims 21, 22, and 23, the limitations of these claims correspond to the limitations of claims 1, 15 and 18, respectively. Thus, they are rejected on the same grounds as claims 1, 15 and 18, respectively.

Regarding claims 24, 25, and 26, Adobe teaches an apparatus comprising a memory for storing a program (page 705, paragraph 5, beginning with "Memory limits")

and a processor for executing said program (page 705, paragraph 1, lines 2-4). The remaining limitations of these claims correspond to the limitations of claims 1, 15 and 18, respectively. Thus, they are rejected on the same grounds as claims 1, 15 and 18, respectively.

Regarding claims 27, 28, and 29, the limitations of these claims correspond to the limitations of claims 1, 15 and 18, respectively. Thus, they are rejected on the same grounds as claims 1, 15 and 18, respectively.

Regarding claims 30, 31, and 32, the limitations of these claims correspond to the limitations of claims 1, 15 and 18, respectively. Thus, they are rejected on the same grounds as claims 1, 15 and 18, respectively.

### ***Conclusion***

10. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Wise et al. (U.S. Patent No. 6,130,676); Image composition system and process using layers.

Smith et al. (U.S. Patent No. 6,301,382); Extracting a matte of a foreground object from multiple backgrounds by triangulation.

Van Doan et al. (U.S. Patent Application Publication No. 2002/0027563); Image data acquisition optimisation.

Alkouh (U.S. Patent Application Publication No. 2003/0189568); Image with depth of field using z-buffer image data and alpha blending.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID T. WELCH whose telephone number is (571)270-5364. The examiner can normally be reached on Monday-Thursday, Alternate Fridays, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on (571)272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dtw

/Lewis G. West/  
Primary Examiner, Art Unit 2618